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ABSTRACT

A study researched the role of literacy, language, and numeracy as vehicles for learning in training packages delivered at South Australia industry sites. Data were gathered through onsite interviews or focus groups with trainees, workplace trainers, resource and training support persons, and managerial and supervisory persons, of their opinion of the delivery of a Horticulture Training Package in two work sites. The research revealed key aspects of the implementation of the training package, including the following: (1) the robust nature of learning as situated practice; (2) the role of collaborative learning; (3) a need for trainer awareness of their teaching strategies in the facilitation of learning; (4) the primary role of oral communication as a learning tool; (5) the need for a meta-language awareness for trainees and trainers; and (6) continued balancing of on- and off-the-job training to build skills, knowledge, and understandings. The study found that industry networks were needed to link work and training experiences, professional development opportunities, pathways into and across training, ongoing review processes, and resource development for specific industries. The individual perceptions of one trainee in the study are also reported. (Contains 32 references.) (KC)

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Learning work, learning to work: literacy, language and numeracy as vehicles for learning in Training Packages

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Preamble

This AVETRA conference paper is an extraction. It is taken from a research project, soon to be published, that is part of the work of the South Australian Centre of the Adult Literacy and Numeracy Australian Research Consortium (ALNARC SA). The Commonwealth, through the Department of Education, Training and Youth Affairs, funds the national consortium under the Australian National Training Authority (ANTA) Adult Literacy National Project. The research project investigates the role of literacy, language and numeracy as vehicles for learning in industry Training Packages and argues that the teaching and learning of vocational skills requires a focus on the key skills of communication, numeracy and learning to learn as a conscious part of the process of achieving vocational unit outcomes.

Today's paper is divided into four parts. It will look at the aims, methods of data collection and research findings from the study. The paper will conclude with the voice of one research participant. Taken from the guided interview, 'Elizabeth' speaks about her training, and the teaching and learning it affords, and positions herself within the new training model.

Project aims and overview of the study

In 2000, ALNARC SA investigated aspects of training and the training environment of one Registered Training Organisation (RTO) delivering the National Training Packages in South Australian industry sites. The Training Package delivery was of the *Horticulture Training Package*, with a broader look at the culture of training related to the fields of Civil Construction, General Construction, Horticulture, Agriculture and Extractive and Mining Industries. The RTO involved was registered to deliver the training of Training Package units and assess using the Training Package *Certificate IV in Assessment and Workplace Training*.

This paper will reflect upon literacy and numeracy for and in workplace training. It is in the interpretation of the Training Package model that the delivery of quality training takes place and quality teaching and learning occurs. The study argues that trainers and trainees engage in a multiplicity of literate and numerate practices as they engage in the training process, and that these practices merit attention as a way to encourage good practice in industry training. Workplace practices can be thought of as involving literacy as 'rich and meaningful formulations' Castleton (1999, p 22) on any work site. Individual performance is less a part of the way work is achieved; rather, a 'sharing of knowledge and skills' constructs work in new times (Luke 1993). Gowan (1992) confirms the view that literacy skills as expressed through auditing processes and represented in discrete units may not deliver the effective work practices for industry in the post-Fordist era, when 'productive diversity' (Cope and Kalantzis 1997) is an appropriate response to 'a rapidly changing world' (Gowan

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1990, p 15). Industry training requires a training culture to both reflect the cultures at work in work, and to facilitate as new skills are developed for new times. It is through examples of good training practice, as evidenced in this paper, that better training can result.

My paper has its origins in an investigation of the efficacy of language, literacy and numeracy competencies embedded in the units of the Training Packages. The research interest has, however, moved from disentangling discrete literacy and/or numeracy skills, critical as they are, to an emphasis of the *role* of language literacy and numeracy as vehicles for learning in the units of competence. The understanding here is that specific literate and numerate practices enable learning, and that the learners' ability to manipulate such practices according to their learning needs is key to the learning process.

New workers, changed working conditions and changing work patterns are the focal points that I will consider in this discussion about work and learning and the role of literacy and numeracy practices in this. The ways in which new work practices and new training agendas are taken up will provide the lens for this investigation. And the voices of research participants in this text will allow the reflections to move from theoretical and policy considerations to the everyday practices that seek to effect the changes taking place. For example, when thinking about work teams, one research participant reflected upon his management role in this way;

Well ... that's just basic supervising people, organising daily, weekly, yearly programs, sorting out OH&S issues, even HR (human resource) issues, just basically looking at ways to continue to improve the team with the team involvement, you know looking at better ways, making sure that they are having plenty of input, they're not just told, 'This is what you are going to do', let them have some input and actually enjoy the job and get better outcome out of it. (Research informant, August 2000)

The new training agenda in Australia at this time, the National Training Framework (NTF, Australian National Training Authority 1997) is a collaborative Government Industry project and has at its centre industry Training Packages intended for delivery by a RTO predominantly on the worksite. This training model essentially shifts the location for training familiar under the National Training Reform Agenda (NTRA) of the late 1980s and early 1990s from the training institution to the worksite, and moves away from curriculum-based industry training, while holding on to the concept of competency-based training (CBT).

So, the study aims to examine the educational and management strategies that influence trainee learning on a workplace training site, as facilitated by a RTO with the management strategies that construct a culture of learning within a skill centre. This paper will allow the range of research participants engaged in the study to talk about their practices and understanding in the reception, delivery and facilitation of the Training Package model, including: the trainees, trainers, training package coordinators and resource persons, workplace literacy support persons and skills centre managers. A central theme throughout the paper is the literate practices at work to get the job of training done (practices that collapse into sets of social practices and can be named as a 'discourse', Gee 1990).

It is on the basis of [such] understandings of how discourse works within social practices that people can come to question and look beyond existing discourses, or existing relations of dominance and marginalisation between discourses, and so advance knowledge. (Fairclough 2000, p 4)

Although Training Package units capture the skills development expected of an employee in the workplace, and not the learning process, this research asserts that the learning process is synchronous with training in the workplace. 'The concept of a competency focuses on what is expected of an employee in the workplace *rather than the learning process*, and embodies the ability to transfer and apply skills and knowledge to new situations and environments' [Author's emphasis] (Australian National Training Authority, Training Package Development Handbook). Key questions to locate interpretations of the Training Package model relate to the broad issues of how trainers incorporate the Training Package model into their practice, specifically: what instruction/teaching practices do they adopt to facilitate trainees reaching accreditation goals?

I believe that literacy and numeracy have a major role here. Literate and numerate practices are integral in the process of acquiring skills, knowledge and understandings; they are inseparable from the social practices that provide the discourse that does the work of learning in training. This study intends a documentation of the learning practices and strategies, both formal and informal, that are utilised as a medium for learning in the workplace. More specifically, the focus will be on the strategies that are specifically related to the definitions of literacy and numeracy operational on the research sites. Research findings will provide insights about learning; about workplace learning and literacy and numeracy as vehicles for learning; and the Training Package model and the inclusion of literacy and numeracy competencies in Training Packages.

Data collection

The study was informed by a broad range of literature around work, the work of language and literacy in learning, and pedagogical practices for workplace training. Data collection took place in two industry sites and at a skills centre. The research purpose was to examine the educational and management strategies that influence workplace learning. Four categories of research participant were selected:

1. Trainees;
2. Workplace trainers;
3. Resource and training support persons (literacy and numeracy support and Training Package resources); and
4. Managerial and supervisory persons.

Research informants 2-4 were interviewed individually, while some trainees were interviewed both individually and in a focus group.

The study commenced in May 2000. The sequence of activity for the research involved an ethics clearance, literature review, on-site data collection (August-October), analysis of data, and the writing up and dissemination of research products. Research products will include a research paper and research report, with

an additional leaflet for practitioners containing key findings and citing their relevance for trainees, trainers and Training Package coordinators and managers.

Research findings

The research participants in this study have made available a body of information that touches upon each of the categories listed here. The information from the data clusters around two organisational levels: the micro level (trainees, Training Package coordinators, resource developers and trainers) and the macro level (industry partners, skills, centre managers, supervisors). At the micro level, the research study revealed key aspects of the teaching-learning exchange.

There were six specific findings:

1. The robust nature of learning as situated practice
2. The role of collaborative learning
3. A need for trainer awareness of their teaching strategies in the facilitation of learning
4. The primary role of oral communication (NRS indicator) as a learning tool
5. The need for a meta-language awareness for trainees (and trainers)
6. Continued balancing of on/off job training to build skills/knowledge/understandings.

The macro level presented as the structural support required to progress learning. This involved five components:

1. Industry networks to link work and training experiences
2. Professional development opportunities to advance understandings, skills and knowledge of training
3. Pathways into and across training that enable access and equity
4. Ongoing review processes enabling Training Package fine tuning
5. Resource development within specific industries, ITABs and VET programs.

The research site - one experience of Training Packages implementation

I now want to use the data from the study to build a picture of how one RTO (two trainers) and their trainees (six trainees, including one supervisor) engage with the Training Packages. Here I have explored the actual pedagogical practices and learning strategies, both informal and formal, that are utilised as a medium for learning work and learning about work - with specific reference to the definitions of literacy and numeracy operational on the research sites. It was my view that this RTO was exemplary in its interpretation of the Training Package model, providing a rich set of learning experiences for its trainees.

The Training Package model offers work site training through a negotiation between the workplace trainee and the RTO trainer. In many industries the implementation process is still underway, with the release of Training Packages across industries being phased in from 1997/1998. The Horticulture Training Package was first used in early 1999 (Trener 2000) and, for the RTO represented in this study, the implementation process occurred over 1999/2000. This RTO worked through the details, issues and ways of working to effect their implementation of Training

Package delivery. The RTO identified its way of working as a close partnership with the state industry ITAB (Rural Training Council), to fully understand the intent of the package and to question the ITAB Training Package coordinator in detail on specific fine points of the model. The RTO training team shared information as they planned for delivery and questioned the Skills Centre research and development manager on aspects of the model that were unclear. One trainer indicated that on many points, it was a matter of 'working it out myself'. This, it was recorded, 'took a lot of effort'. Effort was focused upon putting all the paperwork in place, thinking about resources and then 'working with the workplace and tying training into the workplace. That's the big thing that we're really focussed on'.

It took a while to just understand how, to appreciate how they work in the workplace. You know I was doing all hands on, and then began to realise I need to structure this a bit more in some classroom work for them, just for that structure we still have to learn this information, but making sure that there was a balance with it on the job. (Trainer)

In fact, trainers reported that in the early stages of the implementation process they were ready to fit in with changes to training schedules if the workplace requested such changes, but with increased confidence in their learning program, they were more insistent on a pattern for training as agreed in the original training timetable.

The RTO in this study was clear that training was not an isolated activity, and adjunct to the work of the industry, it was critical for the RTO to build into its training what the two trainers termed as a culture of learning. This developing culture was evident in the structure of the training. One key to this is the role of communication.

Yes, in fact we've got fairly good communications because we've got such a small team so yeah, we kind of moved into it before we completely understood it, and it was moving in slowly and then making sure. We had regular meetings with our head of department where issues were brought up or things we didn't understand cleared, and it also gave us an opportunity to talk about things that may have happened on the job that you would have done differently next time, and thus understanding how the packages work. (Trainer)

Concluding remarks: the perspective of one trainee

What are the links between the theory and practice emerging from this analysis of workplace training? The argument has been that the teaching and learning of vocational skills requires a focus on the key skills of communication, numeracy and learning to learn as a conscious part of the process of achieving vocational unit outcomes. It is in the interpretation of the Training Package model at this time - when the new work order encourages new workers, new knowledge practices and new ways of doing training - that is important. The interpretation of the Training Package model evidenced in this study is one where skills are not thought of as merely techniques to be learnt through formulaic methods. The research informants offered possible ways of working with the Training Package model to promote rich and meaningful literate understandings and formulations (after Castleton 1999). Language, literacy and numeracy are vehicles for learning in training programs and in the training process.

I think the following commentary - the voice of one of the research participants in this project 'Learning work, learning to work: literacy, language and numeracy as vehicles for learning in Training Packages' - helps to look at the practical and theoretical issues for workplace training at this time. Elizabeth (not her real name) is representative of a new worker for changing times. Elizabeth trains and works in an industry with a lower representation of female workers than male. She chose to work and train in the industry because of her positive experience in a horticulture access course for jobseekers and 'discovered that I actually really, really liked it'.

I have taken Elizabeth's comments (taped in a guided interview) and organised them according to the categories that surfaced in the research findings, such as 'the robust nature of learning as situated practice'. It is in this idea of positioning training within everyday work practices that the Training Package model is both a departure from and a return to a model of learning for work that is at the same time vigorous and problematic. It is vigorous in the sense that on-the-job training delivers a currency that is immediate and purposeful, but problematic in that good practice requires the kinds of examples of Training Package interpretation/exploration that I have wanted to expose in this study.

Elizabeth tells us explicitly why her training works for her in terms of content, method and interest. Behind Elizabeth is an energetic and dedicated RTO team using industry knowledge (content), learning theory (method) and applying flexibility (interest) to their interpretation of the Training Package units relevant to their industry. This team works within their industry and in a skills-centre; together, they encourage a culture of robust learning for the work of the industry, and the work of training.

Pathways into training and work

Training Package units are available to construct learning programs that bridge unemployment and traineeships/apprenticeships.

I was unemployed at the time and I actually had a friend who actually worked here and he said 'Why don't you try a horticulture access course', which is just a short course that gives you basic skills so you can do the lower level assistant work on site, and so I started that and got through that at the end of 13 weeks and did very well.

Customising training

Training can be made to order. Trainees will choose their training with the RTO facilitator. Units appropriate to their work and learning needs are possible.

Jo [RTO trainer] is the person who is actually structuring our training, the person who schedules training days and things like that. First we sit down and assess whether you need to do more work, whether you are fairly up to speed so you only need a day, so we actually sit down and talk through what training I actually need. Jo lets me know what training days she's scheduled in and the subjects [units] we'll be doing. There are a number of modules that you need to complete, yes, so you basically sit down with Jo, the person who is organising the assessing, putting together your package for you. You don't get training in the areas that you are not going to be practically carrying out. Sometimes units are added. Just the other day Jo said 'I think I'll put another unit in this area' because it would be good for maintenance of my machinery and things like that.

Trainer as mentor and guide in the learning process

Trainers with both industry knowledge and pedagogical understandings provide possibilities for rich teaching/learning experiences.

Personally I am getting education as well as getting paid work, which is a hell of a lot better than full-time school on Aust-study, and I also feel I get much more focussed attention than you would in a classroom or more formal situation because you're there one to one with the assessor. I also feel really lucky to be with Jo the way she puts it together because I know her personally, how much effort and genuine, I suppose care for the well being and encouragement and supporting to keep people feeling like they want to keep going, and that reassurance when you're feeling a bit challenged that it's OK, you will get through it.

Flexibility of training content and times

The flexibility of the Training Package Model encourages a proactive response to both learning in and for work. Training can be built around individual trainee learning needs as well as work schedules and weather patterns.

Since I've started with level 3 [Certificate III, Horticulture Training Package] under the restructured packages the training is really great, much more flexible I found with my situation, and it's really good. I have set things that aren't necessarily urgent I suppose, but I have things set aside in terms of training and learning so that I can utilise a rainy day when I can't actually get out there, and so in horticulture particularly that flexibility is really good ...

Learning as an active process

The practical and theoretical knowledge, skills and underpinning knowledge are cross-referenced to enrich the learning.

Basically we look at the technical and background knowledge that you need to be able to effectively carry out your practical work so, for example, what I am doing at the moment, doing some weed spraying, the underpinning knowledge for that is all your safety chemical use modules- it comes down to manual handling-a bit of maths involved with your calculations of your volumes, and things like that, and also that underpinning knowledge in that respect would be looking at particularly level III now, looking at different products, looking more at the active constituents in the actual products, getting more detailed knowledge so you can utilise that in your practical.

Learning to learn

Learning is a conscious act, calling upon particular skills and understandings.

When we are doing plant identification or catching up on our files she will get the books out and go with the students and go around and she will say to them 'Do you know how to use this book? Do you know how to look up an index?' And will go around and see that they understand how to use it correctly, and if they don't well obviously she shows them how to use it.

On-site learning as co-construction

This involves learning from and with the work team and RTO trainer.

A lot of the learning is done through actually being on the job and coming across a situation where you might not be sure of which direction to go next or you make a mistake, which will be pointed out by your supervisor, you don't do it again.

You do most of your learning; well I think I do, in the job.

As Elizabeth describes her training experiences, she gives flesh to the bones of the Horticulture Training Package units that are part of her accredited training journey. Elizabeth is part of a community of practice where learning to work and learning work are synchronous. Literate and numerate practices make this learning possible.

And the final word is hers;

To be honest I really don't see many down sides to learning. It works really well for me at the moment.

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